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ABSTRACT

Using data from a previous study, this study investigated the adoption of modern graphic design techniques by daily newspapers. A scale of modern design was constructed from available literature and tested for internal validity by determining what design practices were included in sample papers. The scale was then used to test assumptions about the kinds of newspapers that would be more likely to adopt modern newspaper design techniques. The findings suggest that modern newspaper graphics are being used by metropolitan newspapers to attract new or infrequent readers rather than to improve the readability of the paper for regular subscribers. Twelve tables of data are attached. (Author/RL)

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ADOPTION OF MODERN NEWSPAPER DESIGN PRACTICES: AN EXPLORATORY STUDY

by

Gerald C. Stone, John Schweitzer and David Weaver

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Stone is assistant professor at California State University Long Beach; Schweitzer and Weaver are both assistant professors at Indiana University. The study is a secondary analysis of data gathered under a grant from the American Newspaper Publishers Association and the authors were co-recipients of that grant.

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ABSTRACT

Adoption of Modern Newspaper Design Practices:
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This study is a secondary analysis of a 1976 study on the content and appearance characteristics of a national sample of jointly owned, morning-evening dailies in the same city.

Conceding limitations on the generalizability of findings, the study attempts to explore the adoption of modern graphic design techniques by the daily newspaper field. A scale of modern design is constructed from the available literature and tested for internal validity to determine which design practices have been accepted by the field, as evidenced by their inclusion in the sample papers. Once constructed, the scale is used to test assumptions about what kinds of newspapers may be more likely to have adopted modern newspaper design techniques.

Beyond the descriptive data and category analysis on the modernization scale, the study subjected ratio data to a more complex test in an effort to determine why management teams may have adopted the modern design practices. The findings seemed to suggest that modern newspaper graphics were being used primarily by papers in metropolitan areas to attract new or infrequent readers rather than to improve the readability of the paper for those already subscribing.

Adoption of Modern Newspaper Design Practices:
An Exploratory Study

Countless studies have investigated newspaper graphics from a readership perspective and have led to drastic alterations in the appearance of the daily newspaper. Reseachers, theoreticians and practicing newspaper personnel have come to recognize a makeup dyad that is either traditional or modern, and have ennumerated the differences between the two graphic design forms. This study does not deal with an evaluation of these accepted differences. Instead, we concede they do exist and we seek only to document the current status of newspaper design as it is being adopted across the nation.

This study is a secondary analysis of a 1975 ANPA-sponsored survey of morning-evening joint owership newspapers.[1] It therefore is not representative of all U.S. newspapers and it is limited to an analysis of only those variables in the original survey. Even with these weaknesses, though, it was possible to make observations about the adoption of modern newspaper design.

The present study is based primarily on the traditional versus modern design dyad. Practices which are placed in one category or the other could be documented individually, but a more general distinction, we believe, will suffice. The core of traditional design is vertical makeup while the essence of modern design is horizontal makeup.[2] Crowell distinguishes between the two terms writing: "Vertical includes balance, contrast and balance, brace. Horizontal layouts are: streamline, functional, magazinish, tabloid."[3] The dean of newspaper design, Edmund Arnold, devotes much

of his authoritative text to the distinction between traditional and modern makeup practices.[4] He, with the majority of makeup text authors, acknowledges neither the traditional nor modern design is intrinsically superior to the other, but all of the authors suggest the modern design practices are the result of research which indicates modern makeup is more readable.

But, again, the present study makes no value judgment between the two forms of makeup. It is our intent to merely document--as the data base allows--the present use of makeup practices by the nation's daily newspapers. One point, however, need clarification: the method by which design practices are adopted--specifically, whether makeup fluctuates on a short-term basis or whether it is fixed by managerial decision and can be considered as relatively constant over time. Westly writes:

> Because continuity in the personality of a newspaper is important, the desk may not choose any makeup style on any day; it cannot decide on a new typographical "dress" on the instant, for example. Each paper has certain rules of typography and makeup that must be followed. The desk may suggest changes in rules, but final decisions about major changes in the paper's personality obviously rest with higher authority...The editor can improvise and experiment with new ways of displaying the news as long as he doesn't leave behind the established character of his paper.[5]

Arnold makes it clear that typographical decisions must be a matter of policy which will be carried out by the newspaper's layout editors and other production personnel on the staff. He adds, "If the publisher chooses a format because 'I like it,' it is certainly his prerogative."[6] We may assume then that basic design decisions are not altered on a day-to-day basis, but are matters of policy

that remain relatively consistent over time. With this in mind, we will continue under the premise that the design characteristics measured in the original survey are not capricious practices but are in fact fundamental appearance characteristics of each sample paper.

Hypotheses

In this secondary analysis, the primary purpose is to explore the data to describe the adoption of modern newspaper design practices. We will attempt to document which of the modern graphic techniques are being used by a majority of sample papers and which of the techniques are (by their inclusion) considered crucial elements of modern newspaper design by those papers which have adopted the new design.

The original data bank did contain several independent variables that will be analyzed to test this study's hypotheses:

1) Geographic location of the newspaper is a determinant of rate of adoption of modern newspaper design.
2) Chain-owned newspapers will be more likely to have adopted modern design practices than non-chain owned papers.
3) Larger newspapers--those with more sections--will be more likely to have adopted modern design.
4) An evening newspaper will be more likely than a morning paper to have adopted modern design.
5) The adoption of modern newspaper design will be positively related to:

   a. a paper with fewer than seven columns on page one
   b. a paper with fewer than seven columns on inside pages
   c. a paper with fewer than seven columns on the editorial page

6) The adoption of modern newspaper design is associated with:

a. larger-circulation papers
b. more "open page fronts" on inside sections
c. the use of more page one pictures
d. fewer dual subscribers to the two jointly owned papers in the same city
e. a higher monthly delivery price for the paper
f. a higher percentage of street sales
g. a higher percent of the homes reached in the city (penetration)
h. a greater number of households in the city

7) There is a relationship between modern newspaper design and appearance characteristics such as banner heads or use of very large page one pictures--characteristics usually associated with more sensational graphic presentation.

Admittedly, the hypotheses are not linked to broad theoretical constructs, and this is because the study is both a secondary analysis and exploratory in nature. The hypotheses are, however, consistent in suggesting that the adoption of modern newspaper design will be greater in larger cities, in more metropolitan areas, among larger newspapers with centralized management. These papers will also have adopted the practice of reducing columns below the traditional eight-column format (possibly in an effort to trim the page and reduce newsprint expenses) and will generally be designed to attract readers, including street purchasers, through more sensational layout formats. The ideas expressed here are among methods ennumerated by David Shaw in his article on the survival of the daily newspaper.[7]

Before proceeding with the analysis, it is proper to describe the limitations and advantages of the original data bank on which this study is based.

The Sample

The data bank for the original ANPA dual subscribers study was drawn from the Audit Bureau of Circulations' (ABC) "Fas-Fax" listing for September 1975, and consisted of a random sample of 100 cities with jointly-owned morning-evening newspapers drawn from a total of some 140 such cities. This methodology had both advantages and disadvantages for the present secondary analysis.

Using only jointly-owned morning-evening dailies has the advantage of analyzing papers that are free from real competitive situations: those in which graphic design decisions may be an attempt to copy or avoid copying locally competing newspapers or even papers from a nearby city. It may seem that morning and evening papers in the same city would be designed differently from each other (which would have been enough of a factor to preclude undertaking the present study of graphics), but the original research indicated no appearance differences between papers in the same city.[8] So the sample is advantageous in this respect because having a single management team--which has complete control over the design of both papers--removes the element of competition from consideration in this study.

The primary disadvantage of the sample is that it is not a random sample of all U.S. daily newspapers. Findings from this study of graphics cannot be realistically viewed as valid across the entire spectrum of dailies. Yet there are 190 daily newspapers in this study--half morning and half evening--from all geographic regions and from non-chain as well as chain ownership arrangements. Though the study's findings aren't representative of the entire

field of dailies, they do provide insights which may pertain to the graphics decisions of U.S. daily newspapers.

The Papers

When the sample list was drawn, two copies of the home delivered editions of each of the papers were requested. The total number of separate issues included in the study was 380 because five cities did not participate.

Although content of the newspapers was measured (quantitatively) in the original study, this investigation will deal only with the appearance measurements. Appearance characteristics of the newspapers was assumed to remain fairly constant over the short run. That is, it was assumed that the appearance of the flag, the number of columns, the use of column rules, etc., would not change from day to day. But because the content--and some of the appearance characteristics--would vary from day to day (perhaps the number of pictures used on page one) we requested consecutive issues of the papers: both papers for Monday and both papers for Tuesday, both for Wednesday and both for Thursday, etc., for the various cities in the sample. In working with papers from adjacent days, we could get an average of such appearance characteristics as the number of "open" inside section fronts and the number of editorial cartoons. We could also increase the chance of getting a true measure of appearance characteristics the paper might not use every day such as having a very large picture on page one, publishing an op-ed page, or using four-color separation pictures.

The days of the week requested were systematically rotated over the sample so that there are, in the total of 380 papers, an

equal number of Monday papers, Tuesday papers and so on through Friday. Saturday and Sunday newspapers were not included because of the large number of combined editicns on those days.

Coding Process

Coding sheets were prepared before the analysis and included 43 appearance characteristics. Appearance coding sheets, based partly on past studies, were divided into the following kinds of characteristics: page and column size, type and headline, miscellaneous, color, pictures, page one and editorial page.

Each issue of each paper included in the sample was coded by a journalism student in an advanced editing and makeup class at California State University at Los Angeles, Fullerton or Long Beach. Each characteristic of appearance was measured and recorded on the coding sheets, supervised by Stone, and in nearly every case was a matter of simple measurement rather than a matter of judgment. For the appearance characteristics, in most cases, coders merely recorded a "yes" or "no" answer on such statements as "uses vertical column rules."

The results of the coding process were keypunched and analyzed by computer.

Data Description

As a fundamental purpose of this study was to create a scale of modern newspaper design characteristics, based on actual use rather than theory, it was first necessary to obtain a description of how the sample papers treated all of the appearance characteris tics (Table 1).

Findings from these descriptive statistics bear discussion as this is perhaps the first compiling of graphic use based on such a large sample. The table is presented by stating all attributes in their relation to modern newspaper design, with positive statements being the more modern technique. A re-categorization is possible based on elements which the majority of papers possess, those possessed by about half the sample papers, and those which few of the papers possess.

Among characteristics prevelent in the sample were: the longest page one headline running at least half the column width of the page; boxing stories; using captions (headline type above or beside cutlines); using kickers above heads; and, op-ed pages--for those papers having op-ed pages--that are relatively free of advertising. These appear to be the staple design characteristics of sample newspapers.

About half the sample papers either had or did not have the following appearance characterisitics measured: using serif type in headlines; capitalizing the first letter in most headline words; using occasional hoods on heads; using spot color; using horizontal lines above or below pictures; using ears on the flag; using a traditional typeface on the flag; having an op-ed page; and, using at least two editorial cartoons.

Thos attributes which were used by relatively few of the sample newspapers included: indented headlines; a minimum three-quarter inch deep capital letter on the largest page-one hadeline; using subheads in stories; boldfacing alternating paragraphs in the stories; using four-color separation pictures; using tint blocks behind stories;

using duo-tone pictures; using overlines on pictures; boldfacing the first word of cutlines; having an emblem on the flag; having a news digest on page one; having news briefs on page one; and, using page one pictures as large as 40 square inches.

The descriptive statistics, then, show that few of the measured graphic characteristics were used by a majority of newspapers, but those that were used were related to longer and deeper headlines (kickers, multi-column heads and captions). Many of the items were used by only about half the sample papers, and they formed no discernable pattern. Most of the appearance items were used by less than half the sample papers, and three grouping of these are worth noting: 1) that few papers do anything to add graphic variety to story body type; 2) that color is not usually used in connection with stories or pictures; and, 3) that there is little attempt to lead readers into the paper with page one digests. In summary, the descriptive statistics indicate the move toward horizontal makeup is certainly underway, but many of the more innovative elements of this modern newspaper design are not being implemented.

Creating the Modernization Scale

The key of this secondary analysis approach was to construct a scale of modern newspaper design, to see which graphic elements form the core of what survey papers--by their inclusion--use as a matter of policy. The objective, once the modernization scale was constructed, was to determine the effect of modern newspaper design on the limited number of independent observations included in the original study.

Constructing the scale followed a procedure for determining internal reliability of scale measurements as discussed by Selltiz, et. al.[9] Each of the 31 newspaper appearance variables itemized in Table 1 was subjected to the available literature on modern newspaper design to verify that possession of that characteristic was associated with either the more modern or the more traditional newspaper design. Table 2 provides the results of this process. Twenty-nine of the graphic elements were coded in dyads (either the newspaper possessed the characteristic or it did not) while two of the characteristics were continuous variables: 1) the number of page-one pictures carried both days; and, 2) the percent of total inside sections that were open section fronts (free of advertising). All of the 31 variables were added so that each paper in the study had a total modernization score, and the scale thus constructed was broken at the median to separate sample papers into a low versus high scale score. Each of the 31 variables was subjected to an analysis of variance test to determine its discriminating power.

The results of the discrimination process are presented in Table 3, and those items which discriminated at the .10 level or better were selected for inclusion in the modernization scale.

The two continuous variables were handled differently in constructing the scale. The total number of page-one pictues both days was dychotomized at the median number of pictures (three) and papers with more than three page one pictures were given a score of "one" which was added into the modernization scale. The percent of total inside section fronts that were open was multiplied

by a constant of three so that papers with one-third of the total inside sections being open section fronts would receive a score of "one" on that item and those with more than one-third of their inside sections being open would receive a score of more than one with a maximum score of three for papers that had all of their inside section fronts open.

Table 3 shows that seven variables were not of sufficient discriminatory power to remain in the modernization scale. This means that, among sample papers, the seven were equally as likely to be design characteristics of modern or traditional newspapers: the items are not considered either intrinsically modern or traditional by those making design decisions on the sample papers' staff. Included were:

1) using serif type in headlines
2) having the longest page-one head extending at least half way across the front page
3) boldfacing the first word in a cutline
4) using overlines on pictures
5) having an emblem on the flag
6) having a news digest on page one
7) having less than 25 per cent ads on the op-ed page

It should be noted that using serif type in headlines is actually more closely associated with modern design in the sample papers than with traditional design. The other six variables simply did not discriminate well. Two of these were content variables (the news digest and op-ed page advertising), and three were type items that have been associated with modern design in the literature. The inability of a flag emblem to discriminate may be due to coding the Bicentennial emblem as a special cut on the newspaper's flag.

The modernization scale had a minimum of 2, a maximum of 20 and a mean of 12.0 for all 190 papers for which the scale could be tallied. It was possible to break the scale score into a low and high scale score for each paper by using the mean value of 12.0 and analyzing the original study's nominal measures, or using the individual scale scores in a Pearson Correlation with the original study's ratio measures.

Nominal Analysis

Is there a difference in use of modern newspaper design based on a newspaper's geographic location throughout the United States? Table 4 shows there is a pattern worth noting, but not the expected pattern that the Northeast and Midwest--centers of most of the country's metropolitan areas--would have the most modernly designed papers. Instead, in the entire eastern third of the country, only the papers in the Southeast were more likely to engage in modern newspaper design practices. The middle third of the country showed that papers in the Midwest states are likely to be more traditional. The Western third of the country, including the Southwest, is much more likely to engage in modern newspaper design. We may conclude that those sections of the country with the oldest newspapers--the Northeast and Midwest--tend to be more traditional in their use of graphics.

This finding seems to suggest that papers with more longevity may retain their traditional design as a matter of policy, but the original study did not include the paper's age, so this possibility is only speculation.

Is there a difference in use of modern newspaper design based on whether the newspaper is part of a newspaper chain? Table 5 shows there is no difference in the use of modern newspaper design ofr chain and non-cahin newspapers, although non-chain papers tend to be more modern in design. We know that one of the accusations about the trend toward newspaper monopoly and chain ownership is that any form of monopolization leads to sameness and less innovation.[10] Table 5 does not support the accusation against monopoly ownership.

The two tables together do suggest that, contrary to our hypothesis, the newspapers most likely to be of modern design are the individually-owned papers in areas that are less rich in historic newspaper tradition.

Is there a relationship between newspaper size--those with more sections and those with less sections--and use of modern newspaper design techniques? Table 6 shows that though there is no significant relationship, there is some evidence that the smaller papers are more likely to be using traditional newspaper design techniques. It is possible that the statistics are reflecting days of publication for sample papers rather than real differences in modern design adoption.

Is there a difference in the adoption of modern newspaper design based on whether the newspaper is a morning paper or an evening paper? Because of the sample, the papers are divided equally between morning and evening publication. There is a body of literature which suggests that today, because of televised evening news shows, the evening paper may be more likely to use the more engaging (modern) design in an effort to attract potential readers'

attention away from the evening news on television.[11] Table 7 shows this pattern only slightly, but the table as a whole indicates there is no significant difference between use of modern or traditional design practices based on the time of publication.

Reduction in the number of newspaper columns is among the most firmly established suggestions for modern newspaper design, yet we also recognize another reason for reducing the number of columns in the paper: a savings in newsprint.[12] It is impossible to determine from this study what the rationale for reducing the number of columns might have been, but it is not illogical to assume that both reasons for reducing the number of columns are related. A management team philosophically open to change might be more likely to reduce columns for either design purposes or for financial savings.

The study deals with reduction in number of columns in Tables 8 through 10. Each of the three tables shows a reduction in the number of columns is very closely associated with modernization whether that reduction is on page one, the editorial page or on inside pages of the newspaper. As a group, the tables confirm that fewer page columns is an integral part of modern design in newspapers today.

Inferential Analysis

Table 11 uses the ratio data already in the study to determine possible causes or effects of using modern newspaper design. These findings bear some discussion.

We find two design elements that are highly related with the overall modernization scale: 1) the total number of open inside

section fronts; and, 2) the total number of page one pictures used both days. Both of these may be considered fundamental to modern newspaper design--as much so as was a reduction in columns. Both, also, are elements of magazine design with its emphasis on departmentalization of editorial matter and its reliance on photo-journalism. From Table 1, we know that the average number of page one pictures both days was five, and we might suspect the modernly designed papers are publishing three or more page one pictures per day. We find also that the average percent of open section fronts (Table 1) for all papers in the study was 50%, including those papers that had no open inside section fronts. The data reveal (table not shown) that of the 136 papers in the survey which did have open inside section fronts, the mean percent of open inside section fronts was 74%. We may suspect then that departmentalization is a widely accepted newspaper design practice today.

The remainder of inferential statistics deal with the relationship between the newspaper and its city of publication. Three of the variables were found not significantly related to modern newspaper design: 1) the per cent of city homes reached, or the paper's local penetration; 2) a higher monthly delivery price of the paper; and, 3) the percent of local subscribers who subscribe to both the city's morning and evening daily paper. In their order, the findings show that modern design is not associated with more complete saturation of the city zone's potential subscribers--it does not, of itself, make local residents more eager to subscribe. Second, there is no relationship between a higher price for the paper and modern design practices. Lastly, as the original study showed,

there is no increase in the percent of residents who take both local papers when one (or both) practices modern design.

The remaining inferential statistics do show significant relationships between modern newspaper design and: 1) a higher percent of street sales; 2) greater city zone circulation; and, 3) a greater number of city households. The first of these positive relationships lends credence to the earlier speculation that modern newspaper design is a method being used to attract readers rather than making newpapers more palatable to those who already do read the paper. Street sales today are a relatively minor portion of a paper's total sales, but one of the few areas of direct competition against other papers and other media for the reader's attention. In this situation, the first glace is often the deciding factor for which paper to purchase, or wheter to purchase a newspaper at all. Apparently newspaper management teams have found that modern design is a better showcase for the product; an attractive window dressing that can increase street sales. The other two significant variables support this view and add yet another dimension. Modern design is associated with greater city zone circulation and a greater number of city households. The finding is that modern newspaper design is being practiced in larger cities. A definite explanation for this phenomenon is beyond the scope of this study, but it is within the realm of possibility that modern design--an alteration which is drastic but is also speedy and inexpensive--was among the first life preservers the metro papers reached for when their circulation figures began sinking in the early 1970s. Of course other expla-

nations of why the metro papers use modern design could be equally plausible, but later studies of how newspapers regained their lost readership might reveal the new graphic design played an important role.

Sensationalism and Modernization

The study did not attempt to analyze the relationship between modern newspaper design practices and sensational presentations, but the data do offer an insight which is relevant in light of the finding that metro papers use modern design. We created a scale of the five most sensational design elements in the original study to see if papers using more of these would also be more likely to use modern design. Table 12 shows these results and indicates that although there are significant differences among the five scale groups, there is no pattern to suggest papers higher on the sensationalism scale will also be more modern in design.

Footnotes

[1]David H. Weaver, John C. Schweitzer and Gerald C. Stone, "Content, Appearance, and Circulation: A Study of Morning-Evening Daily Newspapers," ANPA News Research Bulletin. In print.

[2]Floyd K. Baskette and Jack Z. Sissors, The Art of Editing, (Macmillan Publishing Co., Inc.; New York), 1971, pp. 297-355.

[3]Alfred A. Crowell, Creative News Editing, (William C. Brown, Co., Publishers; Dubuque, Iowa), 1975, p. 145.

[4]Edmund C. Arnold, Modern Newspaper Design, (Harper & Row, Publishers; New York), 1969.

[5]Bruce H. Westley, News Editing, (Houghton Mifflin Co.; Boston), 1972, p. 225.

[6]Arnold, op. cit., p. 284.

[7]David Shaw, "The Newspaper Must Be Fit to Survive," The Quill (February, 1977), pp. 11-18.

[8]Weaver, et. al., op. cit.

[9]Claire Selltiz, Marie Jahoda, Morton Deutsch and Stuart W. Cook, Research Methods in Social Relations, (Holt, Rinehart and Winston; New York), 1959, pp. 184-6.

[10]Ernest C. Hynds, American Newspapers in the 1970s, (Hastings House; New York), 1975, pp. 129-30.

[11]Leo Bogart, "How the Challenge of Television News Affects the Prosperity of Daily Newspapers," Journalism Quarterly, (Autumn, 1975), p. 403-10. "Am and PM Paper Problems Shown in APME Report," Editor & Publisher, (Dec. 14, 1974), p. 36.

[12]Carla Marie Rupp, "Pulbishers Order Narrower Roll Widths to Cut Costs," Editor & Publisher, (Oct. 12, 1974), p. 10.

Table 1

Description of sample papers' graphic features (n=190).

	% OF PAPERS HAVING
Uses no vertical column rules	87%
Typeface in headlines not serif	49
Headlines not all flush left	12
Doesn't capitalize first letter in most head words	41
Uses kickers or overlines on heads	73
Uses occasional hoods on headlines	54
Largest capital letter in P-1 head least .75 inch	23
Longest P-1 headline is least .5 of page width	86
Occasionally boxes stories	84
Uses subheads in body type of stories	10
Boldfaces first word in story paragraphs	5
Boldfaces alternating story paragraphs	4
Uses four-color separation pictures	13
Uses spot color	64
Uses tint blocks behind stories	3
Uses captions with pictures	85
Uses duo-tone pictures	2
Boldfaces first word of cutline	18
Doesn't use horizontal lines above-below pictures	52
Uses overlines on pictures	23
Uses ears in flag	52
Doesn't use Roman, Old English type style in flag	54
Has emblem on flag	20
Has a news digest on page one	37
Has news briefs on P-1 with "refers" to inside	36
Largest P-1 picture at least 40 square inches	33
Has op-ed page	47
Op-ed page (if has) is less than .25 advertising	70
Uses at least two editorial cartoons	55
Mean number of page one pictures both days	5.04
Mean percent of total sections that are open front	.495

Table 2

Division of variables into traditional versus modern design characteristics, according to available literature.

	TRADITIONAL TRAITS (SCORE=0)	MODERN TRAITS (SCORE=1)
A.	has vertical column rules	no vertical column rules
B.	headline type is serif	headline type not serif
C.	heads all flush left	heads indented, centered
D.	capitalizes headline words	uses "down" style in heads
E.	no kickers or overlives	uses kickers or overlines
F.	no hoods on headlines	uses hoods on headlines
G.	top P-1 head cap $>$ .75 inch	top P-1 head cap $<$ .75 inch
H.	longest P-1 head $>$ .5 page	longest P-1 head $<$ .5 page
I.	doesn't box stories	boxes stories occasionally
J.	no subheads in stories	uses subheads in stories
K.	no boldface on first word in story paragraphs	boldfaces frist word in story paragraphs
L.	doesn't boldface alternating story paragraphs	boldfaces alternating story paragraphs
M.	no four-color pictures	uses four-color pictures
N.	no spot color in paper	uses spot color in paper
O.	no tint blocks on stories	uses tint blocks on stories
P.	no duo-tone pictures	uses duo-tone pictures
Q.	no captions used on pictures	uses picture captions
R.	doesn't boldface first word of cutline	boldfaces first word of cutline
S.	uses horizontal lines above-below pictures	no horizontal lines above-below pictures
T.	doesn't use overlines on pictures	uses overlines on pictures
U.	uses ears in flag	doesn't use ears in flag
V.	uses Roman, Old English type style in flag	doesn't use Roman, Old English style in flag
W.	has emblem on flag	no emblem on flag
X.	no news digest on page one	has news digest on page one
Y.	no news briefs on page one with "refers" to inside	uses news briefs on page one with "refers" to inside
Z.	largest page one picture than 40 square inches	largest page one picture more than 40 square inches
AA.	doesn't have op-ed page	has an op-ed page
BB.	op-ed page less than .25 ads	op-ed page more than .25 ads
CC.	less than 2 editorial cartoons	at least 2 editorial cartoons
DD.	few page one pictures (below median equals zero)	many page one pictures (above median equals one)
EE.	low % section fronts open (score percent X constant)	high % section fronts open (score percent X constant)

Table 3

Discriminating power of individual graphic items.

Item	Mean if Traditional	Mean if Modern	Difference in Means	Decision on Modernization Scale
A	11.99	14.33	2.34	include
B	14.57	13.50	-1.07	omit
C	13.84	15.52	1.68	include
D	13.14	15.26	2.12	include
E	12.90	14.43	1.53	include
F	13.24	14.64	1.40	include
G	14.00	14.01	.01	omit
H	13.01	14.13	1.12	include
I	12.10	14.39	2.29	include
J	13.91	15.13	1.22	include
K	13.97	15.39	1.42	include
L	13.99	15.10	1.11	include
M	13.37	17.94	4.57	include
N	12.16	15.04	2.88	include
O	13.82	18.82	5.00	include
P	13.86	19.67	5.81	include
Q	12.12	14.31	2.19	include
R	14.07	13.59	- .48	omit
S	13.09	14.84	1.75	include
T	13.55	14.13	.58	omit
U	13.25	14.75	1.50	include
V	13.10	14.72	1.62	include
W	14.26	13.91	- .35	omit
X	13.62	14.59	.97	omit
Y	13.31	15.07	1.76	include
Z	13.36	15.25	1.89	include
AA	13.03	14.95	1.92	include
BB	13.81	14.63	.82	omit
CC	12.91	14.75	1.84	include
DD	13.43	14.88	1.45	include
EE	11.60	14.86	3.26	include

Table 4

Geographic location and modern newspaper design.

	Northeast (n=38)	Middle States (n=34)	Southeast (n=38)	Midwest (n=34)	Plains States (n=28)	Southwest & West Coast (n=18)
Traditional	61%	62%	36%	65%	54%	33%
Modern	39	38	64	35	46	67

$X^2=11.2$; $d_f=5$; $n=190$; $p < .05$

Table 5

Chain ownership and modern design.

	Chain Owned (n=42)	Not Chain Owned (n=139)
Traditional	62%	60%
Modern	38	40

$X^2=2.1$; $d_f=1$; $n=181$; $p > .35$

Table 6

Size of paper (number of sections) and modern newspaper design.

	5 or Fewer Sections (n=90)	6 or More Sections (n=100)
Traditional	57%	50%
Modern	43	50

$X^2=.7$; $df=1$; $n=190$; $p > .40$

Table 7

Time of publication and modern newspaper design.

	Morning (n=95)	Evening (n=95)
Traditional	57%	48%
Modern	43	52

$X^2=1.2$; $d_f=1$; $n=190$; $p > .25$

Table 8

Number of page one columns and modern design.

	Less Than Six (n=22)	Six Columns (n=98)	More Than Six (n=70)
Traditional	36%	38%	79%
Modern	64	62	21

$X^2=29.3$; $d_f=2$; $n=190$; $p < .001$

Table 9

Number of inside page columns and modern design.

	Six or Fewer (n=60)	More Than Six (n=130)
Traditional	38%	60%
Modern	62	40

$X^2=7.4$; $d_f=1$; $n=190$; $p < .01$

Table 10

Number of editorial page columns and modern design.

	Less Than Six (n=44)	Six Columns (n=105)	More Than Six (n=39)
Traditional	36%	51%	77%
Modern	64	49	23

$X^2=14.0$; $d_f=2$; $n=188$; $p<.001$

Table 11

Pearson correlation between modern newspaper scale and selected ratio measures in original study.

	r^2 with Modern Scale	N	P
City zone circulation	+.17	183	.01
Total number of open inside section fronts	+.45	190	.001
Total number of page one pictures in two days	+.23	188	.001
Circulation director's estimate of the percent of dual scribers	+.12	170	.06
Monthly delivery price	-.08	169	.16
Percent of total sales that are street sales	+.20	175	.004
Per cent of city homes reached (penetration)	-.02	183	.39
Number of city households	+.20	179	.003

Table 12

Comparison of more sensational design elements with modern newspaper design.

Sensational elements:

1) uses captions on pictures
2) uses overlines above pictures
3) largest page one picture at least 40 square inches
4) largest capital letter in largest page one headline is at least three-quarters of an inch deep
5) longest page one head extends at least half the distance across the page

	Mean	Std. Dev.	N
For entire population	12.2	3.4	184
One sensational item	10.3	2.8	21
Two sensational items	12.0	3.6	71
Three sensational items	13.0	3.5	62
Four sensational items	12.4	2.8	27
Five sensational items	10.3	3.2	3

F=2.5; between=4; within=179; $p < .05$